HANDBOOK
FOR
ELEMENTARY SCHOOLS

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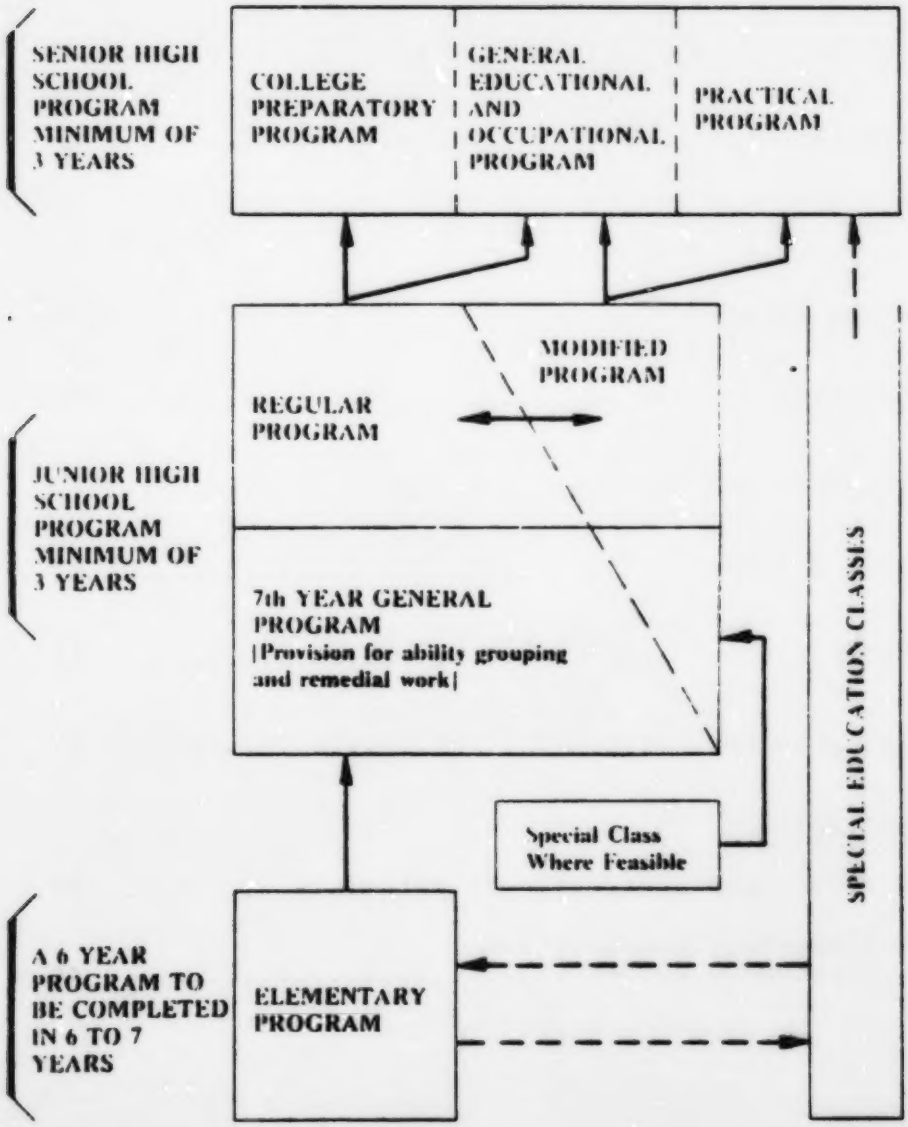
Organization of New Brunswick School Programmes


SENIOR HIGH SCHOOL PROGRAM MINIMUM OF 3 YEARS
COLLEGE PREPARATORY PROGRAM
GENERAL EDUCATIONAL AND OCCUPATIONAL PROGRAM
PRACTICAL PROGRAM
MODIFIED PROGRAM
REGULAR PROGRAM
JUNIOR HIGH SCHOOL PROGRAM MINIMUM OF 3 YEARS
7th YEAR GENERAL PROGRAM
(Provision for ability grouping and remedial work)
Special Class Where Feasible
SPECIAL EDUCATION CLASSES
A 6 YEAR PROGRAM TO BE COMPLETED IN 6 TO 7 YEARS
ELEMENTARY PROGRAM

OBJECTIVES OF EDUCATION

Introduction

The aim of any educational system is determined to some degree by the ideals of the society which maintains the system. In a democratic society, it is accepted that due respect for the individual is an essential characteristic of that society. In consequence, the progress of our society will depend on the outright excellence of its component parts - the individuals. Hence the purpose of a democratic system of education is such training of the individual as will foster and maintain sound ideals in that society and ensure the improvement of society as a whole.

It follows that our system of education should set out to open up and train the minds of children, thus rendering them teachable and enabling them, eventually, to reason logically and well; to instill in their minds the knowledge and love of truth, thus lifting up their spirit and building up their character; to enrich them with knowledge and appreciation of all that has been great in the accumulated culture of mankind and, by so doing, to induce them to look upon the adventure of life as a challenge to greatness in the accomplishment of that which is intellectually challenging and culturally and morally rewarding.

Quality versus Quantity

There is often considerable argument over quality versus quantity in education, whether education should be for a selected few or for the many. The argument is pointless unless we contest the validity of the principle that the progress of society depends on the personal worth of each and every one of its members. This fundamental tenet of a democratic society requires an educational system to provide an educational program for all children and strives to provide equality of opportunity as well. Equality does not mean, however, that all individuals are equal in all respects, but rather that they are entitled, on an equal basis, to the enjoyment of certain rights: legal, political and civil - the latter including, of course, educational and cultural rights. Hence, the school must provide educational opportunities for all, to the extent that the individual can profit from these opportunities.

Pursuit of Excellence

Indeed, if all talents are to be developed to the fullest, the school must recognize individual differences and expect excellence in performance in keeping with the pupil's ability to think and discriminate rationally. The pupil must be constantly challenged and encouraged to reach for the highest possible achievement commensurate with his ability. In such achievement, as he is thus led to understand the cultural background of our society, lies the measure of the individual's capacity of personal growth and satisfaction.

Knowledge is necessary to the development of intellectual competence since it is impossible to think in a vacuum. However, the accumulated knowledge of mankind has become too vast to be mastered by the individual. In those areas of knowledge which constitute our cultural and Christian heritage, it is vital that the school should make a selection of such topics as will help best to shape our attitudes and ideals, enliven our interest and imagination and awaken a desire for further accomplishment and exploration.

It is important to remember that isolated facts do not constitute knowledge, still less culture. For this reason, the school must emphasize the basic concepts, principles and skills by which relationships are established and facts are organized into a body of useful and comprehensive knowledge. By such means, the human mind emerges progressively from a state of dependence to one of independence; from mental immaturity to maturity, subject to varying abilities.

The Individual and Society

One of the features of contemporary life is the growing range and complexity of tasks on which our social organization depends. In order to further an optimum functioning of society, individuals must be prepared to perform tasks that are becoming more intricate and demanding, also constantly changing in character. Education should, therefore, strive to insure that every individual be developed to his maximum. It should provide the child with the opportunity of acquiring a wide range of knowledge and skills and also high ideals of self-improvement and services to the community.

In short, society needs wise and dynamic leadership in all areas of its public life and competent citizens in a wide range of occupations. Underlying it all, however, the need is for honest citizens, dedicated to Christian moral values and altruistic behaviour. Citizens, endowed with such ideals and attitudes will not use their knowledge and ability to create personal power or degrade others to the detriment of society. The acquiring of such qualities of mind and character must go hand in hand, at all stages of the educational process, with mental development and progress in knowledge, skills and attitudes.

In a general sense education ought to serve the purpose of enabling a people to survive and remain a cultural entity; this purpose it may fulfill in the immediate sense by teaching what may be required for self-preservation in the face of physical want and aggression and in the more remote, if none the less real sense, by passing to this younger generation the accumulated cultural heritage of the race. If education fails in the first instance people succumb to hunger, or want, or invasion, and if it fails in the second instance a people disappears because, not preserving its cultural identity through lack of beliefs or values held in common, it culturally disintegrates from within. In modern society many institutions may serve these purposes in part; specifically, however, it is the principal purpose of education to transmit in a meaningful way the best of the culture of a people or civilization in the form of scientific developments, religion, art, philosophy, music, literature and history.

Objectives

- To develop in each child an inquiring mind so that he may find true satisfaction in learning
- To help each child to realize that the learning skills acquired during school life are the tools for continuous learning
- To help each child to develop enough confidence in himself and in others to think imaginatively and explore openly ideas, values and relationships
- To assist each child to recognize the purpose and beauty of man's endeavours in literature, art and music
- To assist each child to develop physically, mentally, emotionally and socially, so that he may become a healthy, happy and contributing member of society

Requirements of an Instructional Programme to Accomplish the Objectives

- Provide a sequential and unified program
- Make possible continuous progress with a minimum of failure and repetition
- Develop in each child the ability to reason and to evaluate information so that he may make decisions with judgment and validity
- Emphasize intellectual development
- Encourage creativity and the independent acquirement and assessment of new knowledge
- Give each child a mastery of essential skills, especially in the art of communication, and a functional body of knowledge
- Develop in each child a sense of personal responsibility
- Prepare each child so that upon the completion of his schooling he may enter into gainful employment or may enter some institution for further education or training as a preparation for entrance into gainful employment
- Provide adequate guidance and counselling services

A BALANCED CURRICULUM

The matters of a balanced curriculum and time in the elementary day are ones that usually generate discussion and some concern.

It is not easy to determine specific time allotments for various subject areas in the elementary school program - time allotments which must be adhered to by every teacher in every situation in the province. Many things influence scheduling and the organization and use of time in the elementary school classroom. Some of the factors that must be considered are:

- The elementary day is not divided into a certain number of periods each of which is of the same duration.
- Elementary teachers frequently use blocks of time.
- Elementary teachers tend to correlate and integrate subject matter and make use of opportunities for incidental teaching.
- Teachers frequently work with groups of children rather than the entire class.
- There is a heavy emphasis on Language Arts and Mathematics particularly at the primary level where the requirements of these programs are heavy and the expectations of parents, other teachers and supervisors are great.
- Scheduling the use of the gymnasium and/or other special purpose rooms creates problems.
- Schedules of specialist teachers must be considered.

All of these factors are valid and contribute to the overall situation. The fact remains, however, that the elementary school has the responsibility for instruction in each of the nine traditional areas of the curriculum and indeed no elementary education program would be complete without planned and careful attention to each of these areas.

The suggested time allotment included here is simply that - a suggestion of a way to deal with the matter. It is based on the minimum required instructional time available per week (4 hours per day for Grades 1 and 2 and 5 hours per day for Grades 3-6) and the amount of time needed to deal adequately with the instructional program in each curriculum area at both levels. The staff of each school should feel free to consider this suggestion and revise and adapt it to meet their needs.

It is most important, however, that each area of the curriculum be included and planned for so that it receives its fair share of the time available. The percentage of time alloted to each area should remain approximately the same in relation to the others as is suggested in the model included here. Correlation and integration are acceptable, even desirable in a good many cases but are no substitute for a planned program in any area of the curriculum. Certain topics and concepts can be clearly identified as belonging to a particular subject area and must be planned for and taught directly. A good combination of direct, correlated and integrated instruction is clearly the best approach.

There never seems to be 'time enough' but we must learn to make the best use of the time there is. Each of us must consider the requirements of the elementary instructional program and the amount of time available and decide on the best match.

A BALANCED CURRICULUM

	PRIMARY (1200 MIN.)		INTERMEDIATE (1500 MIN.)	
	MINUTES	%	MINUTES	%
LANGUAGE ARTS	400	33	425	28
MATH	300	25	300	20
SOCIAL STUDIES	80	6	150	10
FRENCH	--	--	150	10
SCIENCE	60	5	100	6
PHYSICAL EDUCATION	100	8	100	6
HEALTH	60	5	75	5
ART	100	8	100	6
MUSIC	100	8	100	6

ART EDUCATION

The Art Education Curriculum in the Elementary School extends well beyond the traditional range of art activities because its purpose is not to create future artists, or even to teach drawing, but rather to provide opportunities for children to give visual or graphic expression to their personal experiences; to explore, experiment and discover for themselves.

Creative art expression is believed to be a natural birthright of the child and no child should be deprived of this if we expect him to develop to the fullest of his ability; the purpose of elementary education. We are dealing with the young child - curious, excitable, interested in exploring the new environment in which he has been placed, exciting in talking about his experiences both real and imaginary, and expressing these both verbally and graphically. Given art materials, the opportunity for freedom of self-expression, and even minimal encouragement by a stimulating classroom teacher, excitement builds, ideas come out, as the child imagines them, bright, original, lively and learning begins.

In the elementary school program, picture-making plays a major part. Subjects for their pictures should be chosen according to the children's interests, feelings, knowledge and activities. Usually, childhood interests center around such themes as: home, school, community, seasons, weather, special days, play and social activities and relations with others. The above are suggested only to show the widening horizon of the child's interest at this period of development. Local events often suggest more suitable topics and the art program should be flexible enough to allow for quick change if some special event becomes the main topic of conversation in the class.

Knowing what young children are like and what their special interests and needs may be, are important requisites of successful teaching, but A BASIC UNDERSTANDING OF WHAT CHILDREN DO NATURALLY as they draw and paint is just as crucial to the essential encouragement of their creative growth.

Children starting school will differ widely in their modes of expression. Some will have had opportunities for a wide range of experiences with all kinds of art materials while others may not have had any such contacts or experiences. The child with no previous experience may naturally only produce scribbles, while those with previous experiences,

will name their scribbles or symbols and even give verbal explanations to the events they have graphically illustrated. As this level the teacher can expect a wide variety of expressions, and should encourage each child to begin working at his own level.

As experience grows the child develops symbols for people, trees and objects. They should be allowed to do these symbols in their own way and the teacher should accept and respect their honest efforts. Teachers should familiarize themselves with the various natural forms of expression at the Grade 1-3 age levels, i.e. symbolic representations; baselines on which their symbols are placed, x-ray pictures showing events in time and place sequence, fold-over pictures, etc. We should help them develop along these natural lines rather than try to mold them into a more adult pattern by emphasizing skills and techniques.

When children reach the Grades 4-6 age levels they change their attitudes and want to make things 'look right'. To guide them at these stages of development, encourage overlapping of planes to show distance, pattern and detail in their pictures, and the unlimited use of imagination in their work. This acceptance of a free range of imagination is very healthy for young children and should NEVER be repressed.

Opportunities in Grades 5 and 6 should be provided for group and teamwork such as mural and group projects. These develop co-operative attitudes, working for the team, respecting and accepting the efforts and rights of others.

Encourage children to draw or paint directly with a bristle brush or crayon on large sheets of newsprint (12 x 18 or larger). Teachers should never interfere by painting on, or modifying, children's paintings.

Tempera paint, crayons and pastels are suggested as the best media. Colours should be limited to the basic primaries - red, blue, yellow with perhaps black and white added. Later, from Grades 3 or 4 on, green, purple and orange could be added for convenience but only after children in the primary grades have had the excitement of discovering new colours by mixing for themselves. Our task, as teachers, is to help children become sensitive to the world of colour about them; give them freedom, let them try, let them fail, let them succeed. Encourage them and rejoice with them over their discoveries which they can share with others in the class.

We should remember the educational value of the art lesson is the experience gained by doing and not the perfection of the result. If we accept and appreciate children's own creative products, their skills will improve and because of interest and encouragement they will develop to the fullest of their abilities which is all education can hope to accomplish.

All work should be signed, displayed and discussed by teachers and pupils. This discussion period is invaluable - providing the teacher with opportunity for individual evaluations of children's work as well as for remedial suggestions to the class on ways of improving and strengthening their graphic expressions. In this way, the class is exposed indirectly throughout the year to the basics and principles of design. The teacher's praise and encouragement of work which shows originality, good design and strength of composition will lead others in the class to improve their work and benefit from shared pupil-teacher discussions. Should space be limited, have children display a few pictures each day so that by the next art lesson period, all shall have been considered.

Any grading should be an individual effort to improve the child's own standards. In this way, the teacher should expect the talented child to progress according to his own abilities while the child with less talent will enjoy worthwhile experiences without becoming discouraged or frustrated.

To provide variation and more challenge to the program at the Grade 5 and 6 levels, teachers could encourage children to collect and save a number of samples of their best work which they could date and arrange chronologically, place in hand-made paper folio or envelope and pass it to the teacher. If this suggestion is found acceptable by the teacher, it would serve a dual purpose - providing the teacher the opportunity to give an individual evaluation of self-improvement and the assurance to the child of the personal interest of the teacher in his individual progress. Such evaluation should be for the teacher's records only and could include a note of encouragement when such improvement is made. Never should it appear in any form of numerical rating.

Many other art activities have direct educational value and are included in the program. Children should be encouraged to bring in from home all kinds of 'found materials'. These should be stored in large cartoons and labelled for future need. By using these together with 'provided' materials and media, children can create many interesting designs, decorations and constructions.

Activities which require children to shape materials into three-dimensional form are vital to a good art program. These include clay modelling, paper bag sculpture, wood and box construction, masks, mobiles, wire forms, stabilis, puppets, etc. Pattern making is included as children in Grades 4 and 5 develop a great love for pattern. This should include vegetable prints, cardboard, string, lino and wood block printing.

In Grades 5 and 6 figure sketching of the pupil model provides fun and good experience for young students. Poses should be 'action shots' with children taking turns as models. Disregard correct proportions and too structured directions but encourage them to express action in their own way.

Still life, murals and posters including lettering should be added to provide not only variety but to teach composition and design in an informal way.

All lessons should be purposeful but never so highly structured that the individual approach will be hampered. More can be accomplished by praise and acceptance by the teacher than through criticism. If this approach is used, children gain self-confidence in their way of expression and develop a love for and an interest in experimenting with all kinds of media and materials. They also develop the ability to discover for themselves - considering the teacher is a friend, guide, but not a taskmaster. To further this feeling, we as teachers should possess a sense of humour and avoid talking down to children - learning never to underestimate the ability of any child to explore and discover the wonderful horizons of art - its freedoms, its frustrations, its disciplines, its rewards.

Art, and the integration of art into all subjects of the elementary curriculum is rapidly gaining importance - as a means of improving comprehension in the learning situations and the retention of factual knowledge and skills in all subject areas. Since 80% of all information is received through the visual sense, the elementary art education program aims to make the child more observant and more aware of his environment.

Every child is born with the ability to appreciate, but what they appreciate is a matter of learning and conditioning. For this reason, the personal example of the teacher, the set-up of the classroom, the display areas and bulletin board, even the teacher's attire, are perhaps the greatest factors in the development of good taste in children and in their appreciation of good art. Without a dedicated teacher at the helm, any art program may capsize.

The understanding of the tools, materials and media and the ability to use them effectively is essential to a fuller life and definitely a basic part of growth and development.

The program must remain completely fluid, tied only to pupil interest and to purposeful as well as abstract objectives. If properly directed and carried on through the elementary grades, the teacher should expect children finishing Grade 6 to be more outgoing, more self-confident, more tolerant, more appreciative of the work of others, better prepared, more interested in school, in education and what it has to offer.

For more detailed information see ART IN THE ELEMENTARY SCHOOL listed in Appendix B.

HEALTH EDUCATION

The elementary school Health Education program is designed to familiarize students with the simple daily routines required for good health - physical, mental and emotional - as well as the basic health concepts behind these routines. Safety topics are an important component of an elementary health program. The program as a whole should enhance the individual child's ability to live in a safe and healthy manner by helping him establish a firm foundation of health knowledge, attitudes and practices early in life.

The objectives of the elementary school Health Education program should include the development of:

1. the understanding that personal health attitudes and practices are affected by a variety of factors such as past experiences; certain ideas, notions and beliefs; value structures; social pressure and personal goals.

2. an understanding of the dynamic process of growing and developing including the structure and functions of the human body.

3. an understanding that our environment contains the potential for hazards and accidents and that careful and adequate planning and preparation is required if this potential is to be reduced.

4. an understanding of the fundamentals of good nutrition and some familiarity with ways of maintaining these fundamentals.

5. an understanding of the use, misuse and abuse of substances that modify mood and behaviour.

The New Brunswick Health Education program is based on the Healthful Living Series (Doubleday Canada Ltd.). While this program material contains several strands or topics organized at each grade level in a spiral fashion, five of these strands have been identified as constituting a 'core program' to be taught at each grade level each year. These strands are:

- Mental and Social Health
- Growth and Development
- Safety and First Aid
- Nutrition
- Dependency - causing substances

In addition, the program should be introduced each year by use of the strand Health Knowledge, Attitudes, Decisions and Behaviour. Teachers and students may select from other strands and topics as time and interest permit.

PHYSICAL EDUCATION

The elementary physical education program is designed to teach fundamental motor skills and to encourage physical fitness. At the Primary Level, the emphasis is on teaching the fundamental skills in gymnastics, rhythmics and simple games. At the Intermediate Level, more formally structured dances, gymnastic routines and lead-up games to team sports are emphasized.

A comprehensive Physical Education program at the Elementary level should have four components:

1. Formal units of instruction

2. Playdays and Field days

3. Recreational clubs in a variety of activities for students who demonstrate interest

4. An intramural program for the intermediate students

Please note that highly organized, competitive interschool activities are not recommended at the elementary school level.

Basic Physical Education, Grades 1-3 is prescribed for daily use in primary grades and Basic Physical Education, Grades 4-6 is prescribed for use in the senior elementary grades.

LANGUAGE ARTS

The language arts program and language instruction must always hold a special place of importance in any elementary school program. Basic to the attainment of the goals of the school will be a high degree of competence in language for every child.

Language, one of several tools of communication, is a code that has been developed over the years and is shared by all members of the developing society. It enables the members to communicate effectively with each other. If an individual is to participate fully in the life of such a literate society, it becomes necessary for him to master both the oral and written forms of the language code and to learn to use them effectively for both receptive and expressive tasks. It is important to remember:

> Personal and social adequacy depend upon being articulate, that is on having the words and language structures with which to think, to communicate what is thought, and to understand what is heard or read.[1]

To be truly effective any language arts program must embrace all of the language arts - listening, speaking, reading and writing - and their interrelationships. Each of these components has separate and distinct qualities which must be recognized and given consideration by both the teacher and the learner of language. If our aim in language instruction is to develop competence in communicating, we must be concerned with the totality of our language and plan a balanced program to include all four components. We must also recognize and capitalize on the interrelationships among these components: listening and reading are both receptive aspects through which an individual receives or interprets ideas expressed by someone else; speaking and writing are both expressive aspects through which the individual expresses or communicates an idea to someone else; listening and speaking are related parts of an oral communication; reading and writing are related parts of a written communication; from oral language we derive written language. It is necessary then, to think in terms of an integrated language program; one in which the four areas of language are taught and learned as closely related parts of a single language program.

[1] James Britton, ed., Talking and Writing (London: Methuen and Co., 1967), p. 36.

In a literate society, such as ours, the need to communicate will greatly motivate the child to speak and listen with understanding and, in the same way, will later motivate him to read and write. The more opportunities he has to communicate, the more easily he will develop the skills necessary for the effective use of language and the more acceptable his language will be by adult standards. He needs someone to speak to him, listen to him, read to him and respond to him.

Elizabeth Thorn, in her book Teaching the Language Arts, has listed the following assumptions about language and language learning.[2]

> Language is concerned with ideas. It is the symbolization (either in oral or written symbols) of ideas and the interpretation of those symbols.
>
> Since ideas result from experience, language growth is dependent on experience. Language growth and conceptual growth are concomitant.
>
> The four processes of language - listening, speaking, reading and writing - are interrelated and interdependent.
>
> An effective language program is an integrated program, building on the relationships among listening, speaking, reading and writing.
>
> Language is a social phenomenon and is learned most effectively in group situations.
>
> Language is a basic tool for both communicating and thinking. It is, therefore, important that language programs, from the beginning, focus on both these functions.

It is on assumptions such as these that the New Brunswick Elementary School Language Arts program is based.

Competence in language or facility in communication is the ultimate purpose or goal of the school's language program. The school has a responsibility to develop fluency in the use of standard English in both its written and oral forms. It must provide each child with the quality of language needed for a variety of social and economic opportunities. The teacher must, therefore, choose methods of instruction that emphasize the functional aspects of language: its importance in thinking, communicating and socializing.

[2] Elizabeth A. Thorn, Teaching the Language Arts (Toronto: Gage Educational Publishing Ltd., 1974), p. 1.

While it is easy to assume that most children, by the time they enter school have attained a certain degree of competence in the areas of listening and speaking, we must never in our haste to introduce them to the reading and writing components of language, neglect further development in speaking and listening. It is vitally important to provide a complete program of instruction in speaking and listening. Proficiency in these areas usually will be reflected in increased ability to read and write. The ability to use oral language well is, in fact, the most important prerequisite for learning to read and write.

Effective teaching of reading skills requires, for most children, a strong carefully organized program. A basal reading program is provided but must certainly be enriched by incorporating the principles of 'language experience'. The basic program should teach children how to read but the classroom teacher must be constantly alert to ways and opportunities to involve children in the application of these skills in extended reading experiences.

An effective writing program must direct attention to the quality of ideas and expression, a positive attitude toward writing and the mechanics or conventions of written form.

The quality of ideas can be developed and improved through a strong oral language program and the quality of expression through exposure to exemplary samples of written language.

A purpose and an interested audience motivate a child to want to write and write well. These two develop the positive attitude toward writing so necessary for any program.

The mechanics or conventions of writing become important to children as they become interested in having others read their work. This provides the basis for much incidental teaching. The teacher must, however, constantly analyze the writing of the pupils and supplement this incidental teaching with specific, carefully planned lessons with individuals or small groups. These lessons should relate to needs revealed in the children's written work. For example, when children start to include conversations in their stories is the appropriate time to teach the proper paragraph form and punctuation for conversation. A strong program designed for the mastery of the writing conventions must be planned and included by the teacher.

Spelling is another important component of the program. The development of a 'spelling sense' and an interest in the importance of accurate spelling to facilitate communication should be stressed. The basic goal for spelling instruction is to teach children to spell the words they are most likely to need in writing activities as children and adults. A major part of the spelling program, then, is taught through the pupils' writing. A common core of words used for most written communications should also be included. Spelling instruction can often relate quite logically to the reading program in word recognition. The encoding principle that relates to any decoding principle must always be stressed.

The handwriting program should enable students to produce legible handwriting at a reasonable rate and with relative ease. Teacher guides in handwriting as in other areas of the language arts program are available as listed in Appendix B.

The following programs are authorized for use in grades 1, 2 and 3:

Reading 720 - Ginn and Company Teacher's Editions of the Laidlaw Language Experiences Program at the primary levels are approved for use with Reading 720. These contain teacher resource material for use in the total language arts program.

Expressways - Gage Publishing Ltd.

Programs authorized for use in grades 4, 5 and 6 are:

Reading 360 - Ginn and Company
Language Development Readers - Nelson Canada Ltd.

A complete listing of titles, levels, etc. for the Language Arts program is included in Appendix A.

MATHEMATICS

Mathematics has always held a key position in the school curriculum because it has been considered indispensable to the educated man. But mathematical knowledge, especially at the elementary school level, should not be aimed directly at producing future mathematicians, rather at developing students who, presented with new concepts, will recall and use previous learning.

It is quite possible that by the time the students in today's elementary school are employed they will need skills that are not known today. Hence, a mathematics program that stresses the acquisition of skills through rote learning and not through meaningful understanding is not satisfactory. A student needs to understand the principles that govern the structure of our numeration system, needs to develop his own generalizations in order to adjust to new situations, to acquire computational skills and to use this knowledge effectively in a scientific and technological society.

The present mathematics program shifts the emphasis from teaching mathematics as a way of doing something, to teaching mathematics as a way of thinking. It relies on an inductive method of teaching, the guided discovery approach. The teacher leads the children through a step-by-step development to reveal the reasoning underlying the mathematical techniques and processes. The student gains more confidence through his own discoveries than by trying to recall memorized and not thoroughly understood rules. The child, who understands the reasoning behind a mathematical process, can recall and apply that process to new situations better than one who has mechanically learned a list of rules. As children work a number of problems using different methods to find solutions they may be able to formulate a generalized statement for solving problems of a particular kind. In effect, they find their own rules or generalizations which they can apply to future work.

An advantage of the inductive method of teaching is the freedom children experience in looking for ways to solve problems. Without set rules to condition their thinking, children are free to find that a given problem can be solved in various ways. Students discover that there is probably more than one way to arrive at a solution to any problem. Even the slower students, guided by a careful and patient teacher, can appreciate the fact that a problem doesn't necessarily have just one way of being solved. The child is challenged to do what he can do, not what someone else thinks he can do. Each child has the opportunity to experience success in an environment that stresses co-operation and communication rather than competition.

Each new concept must develop in a child's mind through his own activities, handling objects, comparing measurements or shapes, reflecting on the results of his experiments and communicating them to others. Then, through discussion he is led to a deeper understanding of the ideas and their relation to the overall structure of mathematics. Much of their mathematics work will be a co-operative effort. They will explore freely a situation which interests them. If the new understanding and new knowledge are to become part of a child's mathematical equipment he should eventually see them in relation to other mathematical ideas, and so build an organized structure. Each concept introduced should serve as a basis for the development of other concepts. The essential principle for a teacher to remember is that as children are introduced to new concepts, they should recall and use related learning. In fact, the best way for a child to increase his efficiency is to use the material he has already learned to solve a new situation. It is in this way that mathematics becomes a unified structure.

The present program uses a spiral approach. A topic is introduced at an appropriate level and is subsequently represented later in the text and in the series from a fresh and more complex viewpoint. Mastery is not necessarily acquired the first time a topic is introduced but should come eventually to each child.

The easiest method of record keeping is to duplicate a list of basic and supplementary objectives for each student. Then, the teacher can indicate on the list the objectives that have been completed, and the level of competence. The teacher can also note those objectives on which the child is working. The lists can be sent along with the students as they progress from teacher to teacher. As each student is given more responsibility for his own learning he can keep his own record of computational skills, problem-solving ability, etc.

It is most important to evaluate the students' work regularly to note their achievements and difficulties and thus help them meet their needs effectively. Evaluation should be based on daily observations. An occasional testing situation has value to test both understanding and performance but day-to-day observation of the activities, both oral and written constitute the most effective means of evaluation. All testing or evaluation in the teaching of elementary mathematics is for the guidance of pupils and the improvement of teaching procedures. A test should never be used as a disciplinary measure, as a threat, or as a means of separating the good from the not-so-good mathematics students.

Format of the Elementary School Mathematics Program

The scope and sequence and general direction and objectives of the New Brunswick elementary mathematics program are outlined in the provincial Elementary Mathematics Curriculum Guide. More specific directions for achieving these objectives are contained in the Teacher's Editions of the prescribed program material.

The following program materials are authorized for use in the elementary grades:

Mathways 1, Second Edition - Copp Clark Pitman Ltd.
Mathways 2, Second Edition
Mathways 3, Second Edition
Mathways 4
Mathways 5
Mathways 6

Teacher's Editions for this program as well as Mathematics Their Way, a resource book for teachers, are also available. See Appendix A.

MUSIC EDUCATION

'Music is the cement that holds the curriculum together' - so stated the great educator John Dewey with reference to school curriculum balance. Even if we do not consider music as central to the curriculum as did Dewey, we should, however, realize that music meets various unique student needs which cannot be met by other subjects. In particular aesthetic self expression and creativity are in the realm of each of the literary, visual and performing arts, but the need to respond sonically to expressive qualities perceived in organized sound, can only be achieved as part of a balanced music education program. It is important, therefore, that students, as part of their overall education, learn to perceive and respond to the expressive qualities of music, and acquire the skills necessary to facilitate such responses. Furthermore, it is important that students learn to discriminate and criticize knowledgably a wide range of music from different ages and cultures.

These aims can only be achieved in their entirety when the course of study is logical in its conception, and based on sound education objectives.

The curriculum should concentrate on providing the students with functional musical skills (e.g. listening, playing, singing), and the theoretical aspects of the subject should, where possible, be taught, not as a separate entity, but as the need arises from performance situations.

Silver Burdett Music is the prescribed instructional material for New Brunswick Elementary Schools (see Appendix A), however, music specialists may supplement this series with material drawn from other books and records to which they have access.

Silver Burdett Music is a broad-based aesthetic arts approach to music education. It is entirely founded on a series of seven behavioural objectives: Perceiving, Reacting, Producing, Conceptualizing, Analyzing, Evaluating, and Valuing. It is through meeting these objectives that the student achieves the goal of becoming more sensitive to music as an art.

It is important that teachers be aware that this program is designed to be taught throughout the year with a minimum of 120 minutes per week instruction by a specialist or competent classroom teacher. If the time allocation or teaching situation varies appreciably from this ideal, then

it will be necessary to omit some lessons within objectives (but not complete objectives). This is permissable since the program is spiral in concept, and provided intelligent chcices are made regarding which lessons can be omitted, there will be negligible loss of content.

The program has a built-in evaluation package (What do you hear?), which covers the formal and theoretical aspects of the subject, however, there is a much more valid criterion referenced test package available separately, (Silver Burdett Competency Tests), which provides a clear indication if the various objectives are being attained. It is important to note, however, that the evaluation of singing, instrumental performance and effective outcomes, such as attitude and valuing, can only be satisfactorily measured by the teacher.

NATURAL SCIENCE

The overall aim of the elementary science program is to enlarge children's understanding of the world about them in relation to science. Such an aim can be achieved if the children engage in meaningful science experiences. All of the program components described below emphasize experience, sometimes vicarious but usually direct. The experiences are usually embodied in ancillary activities designed to enhance understanding.

The Filmstrips

The filmstrips are intended for use with children in grades one to three and have been prepared so as to permit science to be learned in conjunction with social studies. Strand four of the revised Social Studies Syllabus pertains to the environment. Two of the important objectives of the strand are:

- (To provide for) the development of an awareness of the environment and how it affects man's living conditions and

- To provide an opportunity for the student to work directly with environmental problem solving. The filmstrips have been based upon the two objectives.

The six areas of study embodied in the filmstrips are: The vacant lot, the schoolyard in winter, the lawn, the pond, small creatures in the schoolyard, and trees. There is an obvious emphasis on outdoor study and the study areas have been chosen so that most of the six are accessible to most schools without the requirement of bus transportation. Each filmstrip is accompanied by a cassette of tape commentary as well as a set of notes for the teachers giving guidance on many aspects of study. The filmstrips purposely raise questions designed to create an awareness of the environment and also present specific suggestions on ways of answering some of the questions raised. Thus the filmstrips are intended as the stimulus to the study of aspects of the environment and they are not intended in themselves as complete presentations of environmental concepts. To show the filmstrips without doing the investigations needed for answering the questions which are raised is to misuse the filmstrips.

Alternatives, Years 4 to 6

The suggested alternatives are elements of the Examining Your Environment (or EYE) series, published by Holt, Rinehart and Winston or the Space, Time, Energy, Matter program (better known as STEM) published by Addison-Wesley. Schools may base the science program either upon the EYE series or the STEM program or upon a combination of the two. Sample programs are presented in the sections which follow.

There are twelve titles in the EYE series. Each booklet contains learning activities to be performed by students. Organized around a theme, usually with an outdoor emphasis, each booklet contains outlines of how to do various investigations, additional questions and suggestions to deepen understanding and auxiliary investigations to expand on the basic material. The equipment required for the students to do the investigations is typically of an inexpensive and unsophisticated kind. A teacher's guide provides for each activity a list of materials, time estimates, hints on class organization, a list of concepts to be learned and suggestions about questions or potential difficulties. Every student need not have a copy of each booklet. Experience has shown that one booklet for each two or three students is adequate. Some teachers have successfully cut apart the booklets, laminated the pages and put together the pages for each activity in a file folder. The various folders then form a highly flexible resource fund of learning activities.

The STEM program has a student textbook for each year as well as a special teacher's edition. Each student book contains written information, many pictures and diagrams, experiments to do and additional investigations which may be attempted. The equipment needs for the experiments and investigations are fairly limited emphasizing unsophisticated materials. The number of investigations in STEM is not as great as in EYE but the STEM for years four to six is more typical of a textbook science program than is EYE. Some of the experiments and investigations in STEM could be performed effectively as demonstrations by the teacher or small groups of students whereas the activities of EYE are intended to be done with every student actively participating. The EYE materials lend themselves more readily than STEM to integration with the concepts of the Social Studies program, especially strand four. STEM may be identified as a distinct science program which emphasizes both the content and processes of science.

The teacher's edition for STEM contains in reduced size the pages of the student books as well as extensive information on teaching each lesson. Included are a lesson overview, a list of concepts and behavioural objectives, a list of materials, as well as suggestions for presenting, evaluating and extending the lesson.

The science program embodies study of the following topics:

- Space

  Size, distance and location
  Stars and planets
  The moon
  Water in air

- Time

  Measuring time
  Changing appearance and position of shadows, sun, moon
  Formation and changes of rocks

- Energy

  Heat and its production from fuels, friction and work
  Electricity, what it does and where it comes from
  Motions in the atmosphere
  Light, reflection and visibility
  Gravity and motion of objects
  Compasses, magnets and their uses
  Sound

- Matter

  Food, its growth and utilization
  The human body, its digestive and nervous system
  Classifying some small and large plants and animals
  Studying properties of solids and liquids
  Populations and their continuation

- Environment

  Studying the law, the schoolyard in winter, the lawn and its creatures, trees, the pond
  Collecting, counting, modelling, drawing pictures and classifying objects in the neighbourhood of the school
  Interdependence of living things
  Communities, habitats, mini-climates

Further information on the elementary science program may be obtained from the Department of Education publication Program in Elementary School Science, 1977.

SECOND LANGUAGE - FRENCH

At the present time the teaching of French as a second language occupies an important place in the curricula prescribed by the Department of Education.

In the Elementary school, the core program is designed to introduce students to the fundamental skills required to achieve a 'basic level' of competence in the language.

Objectives

The objectives of the Elementary program are:

I. Attitudinal

1) to develop an interest in and enjoyment of learning French; and

2) to demonstrate an acceptance and appreciation of the French language and culture, particularly in the Canadian setting.

The following suggestions for fostering a positive attitude in the second language classroom may be useful. (Some of these have been adapted from Finocchiaro; Teaching English as a Second Language.)

1) Be positive in your attitude towards Francophone Canadians and their language. Explain that differences exist between French as spoken in Canada and French as spoken in Europe, just as North American English differs from British English. As a general principle, standard French will be taught in the classroom.

2) Take advantage of opportunities for professional growth. Keep abreast of current trends in Second Language teaching, subscribe to a professional review, attend conferences and inservice training sessions where possible.

3) Challenge able students and encourage weaker students by differentiating expectations, demands and assignments and by gearing lessons to the average student.

4) Hold pupils accountable for materials taught by drawing up a serious testing program. Announce all tests in advance.

5) Plan lessons with great care, ensuring variety and wide student participation.

6) Maintain a brisk, businesslike pace.

7) Do not strive for immediate mastery, correcting every mistake. This only serves to discourage the pupils. Remember that language learning is cumulative. Material will constantly be reintroduced and pupils will have many opportunities to assimilate materials not initially mastered.

8) Encourage pupils with praise whenever possible, and provide opportunities for success.

9) Relate language and cultural items to their own age and experience and to current events as much as possible.

10) Keep students busy with interesting work. Have them prepare materials, undertake projects and correct work when feasible.

11) Be patient with the slower learners and those who are timid. Try to give them some individual attention.

12) Ensure wide pupil participation in learning activities. Give pupils plenty of opportunities for speaking.

13) Ensure that your pupils know exactly what is expected of them. Make sure your directions are understood; give plenty of examples and models.

14) Be sensitive to individual needs and aspirations. Cultivate what Mary Finocchiaro calls a 'listening heart'.

15) Make students aware of the personal, vocational and cultural advantages of learning French.

16) Encourage pupils to make personal contacts with Francophones.

II. Linguistic

A. Listening Comprehension

a) Sound Discrimination

1) to distinguish between English and French phonology;

2) to distinguish sounds in French from sounds somewhat similar in English;

3) to distinguish between phonemic differences within the French sound system;

4) to distinguish between the three basic intonation patterns in French.

b) Auditory Memory

1) to retain short sentences spoken at slow-normal speed using native stress, pronunciation, intonation, liaisons and elisions.

c) Comprehension

1) to understand oral messages based on learned materials and emitted at slow-normal speed using native stress, pronunciation, intonation, liaisons and elisions.

B. Speaking

1) to reproduce, that is, repeat words containing all the French phonemes with a fair amount of accuracy;

2) to reproduce simple sentences imitating correct pronunciation, stress, intonation, liaison and elisions;

3) to recall lists relating to numbers, days of the week, months of the year, etc.;

4) to apply to transfer learned material in telling time, using courtesy formulas, introducing a friend, describing a picture, giving a brief autobiography, asking and answering questions and giving simple commands;

5) to express simple ideas within the range of learned structures and vocabulary.

C. Reading

1) to perceive as French the French graphic system;

2) to recognize French graphemes from oral cues;

3) to recall oral equivalents of French graphemes;

4) to recognize written vocabulary and structures from oral and visual cues;

5) to give oral equivalents of written vocabulary and structures previously mastered orally;

6) to read aloud material previously mastered orally, imitating correct pronunciation, stress, intonation, liaisons and elisions.

D. Writing

Writing objectives in the elementary school are necessarily modest, in proportion to the time and energy devoted to the acquisition of this skill

1) to copy correctly vocabulary and structures learned orally;

2) to write sentence substitutions involving a written cue;

3) to spell correctly from dictation or memory (auditory and visual) only material learned orally;

4) to write familiar sentences appropriate to visual cues;

5) to write answers to questions based on material learned orally.

III. Cultural Objectives

1) to identify objects and scenes typical of French Canada;

2) to recognize familiar information he has learned concerning French Canadians and their way of life;

3) to sing two or three verses of two or three French Canadian songs;

4) to sing the first stanza of 'Oh Canada' in French.

In order to promote appreciation of the French Canadian culture, the F.S.L.E.S. teacher might attempt to implement the following suggestions:

1) gear linguistic items to a French Canadian context as much as possible;

2) expose pupils to objects and scenes typical of the second culture;

3) invite Francophones to visit the classroom;

4) use French nursery rhymes and French Canadian songs related to linguistic item being taught;

5) if at all feasible, organize an excursion to an Acadian site such as the Village Acadien or to an Acadian cultural center;

6) foster contacts between pupils and Francophones;

7) have the pupils organize 'an Acadian, Quebec or French Island', in the classroom, a table or shelf containing pictures, objects, flags and the like;

8) make no reflections concerning the superiority or inferiority of one culture to another;

9) have the students prepare in English a brief biography of a famous French Canadian.

Materials

Grade(s)	Program	Publisher
1 and 2	Aux Yeux Des Petits	Holt, Rinehart & Winston
3 and 4	Le Petit Monde	Holt, Rinehart & Winston
	OR	
3 and 4	Le Français Partout Cours Préliminaire	Holt, Rinehart & Winston

Grade(s)	Program	Publisher
4, 5 & 6	Bonjour Canada!	Prentice-Hall
	OR	
3, 4, 5 and 6	Répondez S'il Vous Plaît	Copp Clark Pitman

SOCIAL STUDIES

A major objective of education is the development of a thinking citizen who, while aware of his responsibility to society is at the same time able to fulfill his needs as an individual in changing world. The Social Studies program has a very special role in this development. We might define Social Studies as that area of the curriculum concerned with man's relationship to his physical and social environment and his interaction with other men and their ideas. Therefore, the objectives of the Social Studies program are to enable students:

- To gain a body of knowledge and some basic understandings about man and society, past and present, which contribute to intellectual enrichment and pleasure.

- To acquire skills for transmitting this knowledge and understanding into the development of values and patterns of behaviour fundamental to freedom and an open society.

Following a major evaluation of the elementary Social Studies program in 1981, the program was revised to reflect the concerns and problem areas identified at that time. The program has been revised to provide:

- more and specific emphasis on New Brunswick and Canadian content, society, and way of life,

- more specificity in what is taught by identifying objectives and content at each grade level. The opportunity for flexibility in responding to local needs and interests still exists,

- prescribed learning resources and materials at each grade level.

The pattern or framework of organization is that of 'expanding horizons'. The starting point is close to the child and proceeds from the known to the unknown, from the simple to the complex, from the concrete to the abstract. The overall emphasis is always on <u>people</u> - how they interact with each other and with their many environments, physical, cultural, political, and socio-economic.

At the primary (1-3) grades the focus or emphasis is close to home, - the child - the groups of which he or she is a member - home, school and the local communities. The objective at this level is to acquire some familiarity with the local environment, the basic needs of society and simple ways in which these needs are met. The program looks at the interaction of communities to provide these services and should include both urban and rural lifestyles.

At grades 4-6 the program emphasis or focus moves to our province and then to Canada looking at history, physical features, natural resources, political units, culture and life styles and eventually comparing and contrasting these themes with similar ones for some of our world neighbours.

The program is organized as follows:

ELEMENTARY SCHOOL SOCIAL STUDIES

GRADES 1 - 6

GRADE ONE	-	The Child: as an individual and his family his school community
GRADE TWO	-	The local community: a) where the child lives b) where the school is located
GRADE THREE	-	The regional or larger community
GRADE FOUR	-	New Brunswick
GRADE FIVE	-	History of New Brunswick Study of Canada
GRADE SIX	-	Canada and the World

Appendix A

PRESCRIBED INSTRUCTIONAL MATERIALS

	Grade	Quota
LANGUAGE ARTS		
Pupil Material		
Option 1 Reading 720		
A Duck Is A Duck, Level 3	1	1:1
Helicopters and Gingerbread, Level 4	1	1:1
May I Come In?, Level 5	1	1:1
One To Grow On, Level 6	1-2	1:1
The Dog Next Door, Level 7	2	1:1
How It Is Nowadays, Level 8	2-3	1:1
Inside Out, Level 9	3	1:1
A Lizard to Start With, Level 10	4	1:1
Tell Me How the Sun Rose, Level 11	4-5	1:1
Measure Me, Sky, Level 12	5-6	1:1
Mountains Are For CLimbing, Level 13	6	1:1
Option 2 Expressways		
Skip Along, Level 1	1	1:1
Hopscotch, Level 2	1	1:1
Hide-and-Seek, Level 2	1	1:1
Leapfrog, Level 3	1	1:1
Somersaults, Level 4	2	1:1
Cartwheels, Level 5	2	1:1
Handstands, Level 6	3	1:1
Trampolines, Level 7	3	1:1
Chinook, Level 8	4	1:1
Robin Run, Level 9	4	1:1
Pingo, Level 10	5	1:1
Pokologan, Level 11	5	1:1
Handshakings, Level 12	6	1:1
Lobstick, Level 13	6	1:1
Gage Junior Dictionary	1-6	1:10
I Can Spell 'A'	2	1:1
I Can Spell 'B'	3	1:1
I Can Spell 'C'	4	1:1
I Can Spell 'D'	5	1:1
I Can Spell 'E'	6	1:1

Teacher Material

Option 1 Reading 720	Grade	Quota
Hello Morning Kit, Level 1		1:T
A Pocketful of Sunshine (Pupil Text) Level 2		1:T
A Pocketful of Sunshine, Teacher's Edition, Level 2		1:T
A Duck Is A Duck, Teacher's Edition, Level 3		1:T
A Duck Is A Duck, Studybook, Teacher's Edition		1:T
Helicopters and Gingerbread, Teacher's Edition, Level 4		1:T
Helicopters and Gingerbread, Studybook, Teacher's Edition		1:T
May I Come In?, Teacher's Edition, Level 5		1:T
May I Come In?, Studybook, Teacher's Edition		1:T
One To Grow On, Teacher's Edition, Level 6		1:T
One To Grow On, Studybook, Teacher's Edition		1:T
The Dog Next Door, Teacher's Edition, Level 7		1:T
The Dog Next Door, Studybook, Teacher's Edition		1:T
How It Is Nowadays, Teacher's Edition, Level 8		1:T
How It Is Nowadays, Studybook, Teacher's Edition		1:T
Inside Out, Teacher's Edition, Level 9		1:T
Inside Out, Studybook, Teacher's Edition		1:T
Listening and Talking, Teacher's Edition		1:T
Listening, Reading and Talking, Teacher's Edition		1:T
Listening, Reading, Talking and Writing, Teacher's Edition		1:T
A Lizard to Start With, Teacher's Edition, Level 10		1:T
A Lizard to Start With, Studybook, Teacher's Edition		1:T
Tell Me How the Sun Rose, Teacher's Edition, Level 11		1:T
Tell Me How the Sun Rose, Studybook, Teacher's Edition		1:T
Measure Me, Sky, Teacher's Edition, Level 12		1:T
Measure Me, Sky, Studybook, Teacher's Edition		1:T
Mountains are for Climbing, Teacher's Edition, Level 13		1:T
Mountains are for Climbing, Studybook, Teacher's Edition		1:T

Option 2 Expressways	Grade	Quota
Skip Along, Teacher's Sourcebook, Level 1		1:T
Do This Do That Workbook 1, Teacher's Edition		1:T
Hopscotch, Teacher's Sourcebook, Level 2		1:T
Do This Do That Workbook 2, Teacher's Edition		1:T
Leapfrog, Teacher's Sourcebook, Level 3		1:T
Do This Do That Workbook 3, Teacher's Edition		1:T
Phonics Workbook Levels 2-3, Teacher's Edition		1:T
Somersaults, Teacher's Sourcebook, Level 4		1:T
Pushups 1, Workbook 4, Teacher's Edition		1:T
Cartwheels, Teacher's Sourcebook, Level 5		1:T
Pushups 2, Workbook 5, Teacher's Edition		1:T
Phonics Workbook, Levels 4-5, Teacher's Edition		1:T
Handstands, Teacher's Sourcebook, Level 6		1:T
Springboards 1, Workbook 6, Teacher's Edition		1:T
Trampolines, Teacher's Sourcebook, Level 7		1:T
Springboards 2, Workbook 7, Teacher's Edition		1:T
Phonics Workbook, Levels 6-7, Teacher's Edition		1:T
Chinook, Teacher's Sourcebook, Level 8		1:T
Chinook, Workbook, Teacher's Edition		1:T
Robin Run, Teacher's Sourcebook, Level 8		1:T
Robin Run, Workbook, Teacher's Edition		1:T
Pingo, Teacher's Sourcebook, Level 10		1:T
Pingo, Workbook, Teacher's Edition		
Pocologan, Teacher's Sourcebook, Level 11		1:T
Pocologan, Workbook, Teacher's Edition		1:T
Handshakings, Teacher's Sourcebook, Level 12		1:T
Handshakings, Workbook, Teacher's Edition		1:T
Lobstick, Teacher's Sourcebook, Level 13		1:T
Lobstick, Workbook, Teacher's Edition		1:T
I Can Spell, Teacher's Resource Book	2-6	1:T

MATHEMATICS

Pupil Material

Mathways 1, Second Edition, Bates et al	1	1:1
Mathways 2, Second Edition	2	1:1
Mathways 3, Second Edition	3	1:1
Mathways 4	4	1:1
Mathways 5	5	1:1
Mathways 6	6	1:1

Teacher Material

Mathematics Their Way	1-2	1:S
Mathways 1, Second Edition, Teacher's Manual	1	1:T
Mathways 2, Second Edition, Teacher's Manual	2	1:T
Mathways 3, Second Edition, Teacher's Manual	3	1:T
Mathways 4, Teacher's Manual	4	1:T
Mathways 5, Teacher's Manual	5	1:T
Mathways 6, Teacher's Manual	6	1:T

PHYSICAL EDUCATION

	Grade	Quota
Teacher Reference Material		
'Basic Physical Education for Grades 1-3'	1-3	1:T
'Movement Is For Little People'	1-3	1:3T
'Basic Physical Education for Grades 4-6'	4-6	1:T
Teaching the Three R's Through Movement Experiences	1-3	1:T
Themes for Educational Gymnastics	1-3	1:T
To Move Is To Be (Record Set)	1-3	1:S
Folk Dance Fun Test (Record)	1-3	1:S
Games in the Primary School	4-6	1:T
A Movement Approach to Educational Gymnastics	4-6	1:T
Any Combination, Maximum of 5 per Teacher		
Elementary Physical Education: A Developmental Approach	1-6	1:T
Movement Education: Theory and Practice	1-3	1:T
Introduction to Movement Education	1-6	1:T
Lead Up Games to Team Sports	4-8	1:T
Creative Dance in the First Three Grades	1-3	1:T
Creative Dance in Grades 4-6	4-6	1:T
Any Combination, Maximum of 3 per School		
Listen and Move Records	1-6	1:S
All Purpose Folk Dances	4-6	1:S
Bowmar Series Rhythm Time	1-3	1:S

HEALTH EDUCATION

Pupil Material		
Your Health and You	3	1:1
Keeping Healthy	4	1:1
Growing Up Healthy	5	1:1
Health For Living	6	1:1
Teacher Material		
Your Health, Teacher's Edition	1	1:T
Being Healthy, Teacher's Edition	2	1:T
Your Health and You, Teacher's Edition	3	1:T
Keeping Healthy, Teacher's Edition	4	1:T
Growing Up Healthy, Teacher's Edition	5	1:T
Health For Living, Teacher's Edition	6	1:T

SCIENCE

Pupil Material

Space, Time, Energy & Matter 4	4	1:3
Space, Time, Energy & Matter 5	5	1:3
Space, Time, Energy & Matter 6	6	1:3
Examining Your Environment	4-6	1:3
Your Senses		
Snow and Ice		
Ecology in Your Community		
Trees		
Birds		
Dandelions		
Pollution		
Astronomy		
Running Water		
Small Creatures		
Mini-Climates		
Mapping Small Places		

Teacher Material

Teacher's Sourcebook Elementary Science	1-8	1:T
Primary Science Filmstrip Kit	1-3	1:S
Space, Time, Energy & Matter 1, Teacher's Edition	1	1:T
Space, Time, Energy & Matter 2, Teacher's Edition	2	1:T
Space, Time, Energy & Matter 3, Teacher's Edition	3	1:T
Space, Time, Energy & Matter 4, Teacher's Edition	4	1:T
Space, Time, Energy & Matter 5, Teacher's Edition	5	1:T
Space, Time, Energy & Matter 6, Teacher's Edition	6	1:T
Examining Your Environment, Teachers' Guides	4-6	1:T

SECOND LANGUAGE - FRENCH

Pupil Material

R.S.V.P. Program		
Level 1, Allon-y!	3-4	1:1

	Grade	Quota
Bonjour Canada!		
Ensemble 1, Autour de Moi, Student Text	4-5	1:1
Ensemble 2, Parlons Chiffres	4-5	1:1
Teacher Material		
French Pilot - Primary Level		
'Aux Yeux des Petits' Kit	1	1:T
'Petit Monde' Kit	2-3	1:T
'Aux Yeux des Petits', Teacher's Manual	1	1:T
Cour Preliminaire, Teacher Text	3-4	1:T
Cour Preliminaire, Cut-Outs	3-4	1:T
Cour Preliminaire, Wall-Charts	3-4	1:T
Cour Preliminaire, Tapes (Set of 3)	3-4	1:T
Level 1, Allons-y!	3-4	1:T
Ensemble 1, Autour de Moi, Teacher's Text	4-5	1:T
Ensemble 1, Autour de Moi, Visual	4-5	1:T
Ensemble 1, Autour de Moi, Cassettes	4-5	1:T
Ensemble 2, Parlons Chiffres, Teacher's Text	4-5	1:T
Ensemble 2, Parlons Chiffres, Visuals	4-5	1:T
Ensemble 2, Parlons Chiffres, Cassettes	4-5	1:T
SOCIAL STUDIES		
Pupil Material		
Can You Tell Its Me? (booklets)	1	1:2
Can You Tell We Are A Family? (booklets)	1-2	1:2
Can You Tell Where I Live? (booklets)	2-3	1:2
Canadian Communities	3-6	30:S
Working for Canadians	3-6	30:S
New Brunswick: Its History and Its People	5	1:1
Let's Take a Trip	5	1:1
Neighbours	6	1:1
Canada: Our place in the World	6	1:2
World Communities	6	1:2
Teacher Material		
Can You Tell Its Me?, Teaching Guide	1	1:T
Can You Tell We Are A Family? Teaching Guide	1-2	1:T
Can You Tell Where I Live? Teaching Guide	2-3	1:T
Project Five to Nine	1-3	1:T
DUSO D/1 Kit	1-3	1:T
Canadian Communities, Teacher's Manual	3-6	1:T
Working for Canadians, Teacher's Manual	3-6	1:T

	Grade	Quota
New Brunswick: Its History and Its People Teacher's Manual	5	1:T
Neighbours, Teaching Guide	6	1:T
Canada: Our Place in the World, Teacher's Guide	6	1:T
World Communities, Teacher's Manual	6	1:T

MUSIC EDUCATION

Pupil Material

Silver Burdett Music 1	1	30:S
Silver Burdett Music 2	2	30:S
Silver Burdett Music 3	3	30:S
Silver Burdett Music 4	4	30:S
Silver Burdett Music 5	5	30:S
Silver Burdett Music 6	6	30:S

Teacher Material

Silver Burdett, Teacher's Edition 1	1	1:T
Silver Burdett, Teacher's Edition 2	2	1:T
Silver Burdett, Teacher's Edition 3	3	1:T
Silver Burdett, Teacher's Edition 4	4	1:T
Silver Burdett, Teacher's Edition 5	5	1:T
Silver Burdett, Teacher's Edition 6	6	1:T
Record Sets Levels 1-6	1-6	1:S

Appendix B

ELEMENTARY HANDBOOK AND CURRICULUM GUIDES

Level	Document
1-6	Handbook for Elementary Schools
1-3	The Primary Language Arts Program
1-3	The Organization of Skill Strands in Reading 360
1-3	Primary Spelling Guide
4-6	Experimental Spelling Guide
1-3	Handwriting Guide Primary School
1-6	Elementary Social Studies
1-6	Elementary School Science
1-6	Health Education
1-6	Art Education
1-6	French Second Language
1-6	Elementary School Mathematics